No. 626,431. Patented June 6, 1899.

S. B. KENFIELD.

GANG EDGER.

(Application filed Dec. 15, 1898.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

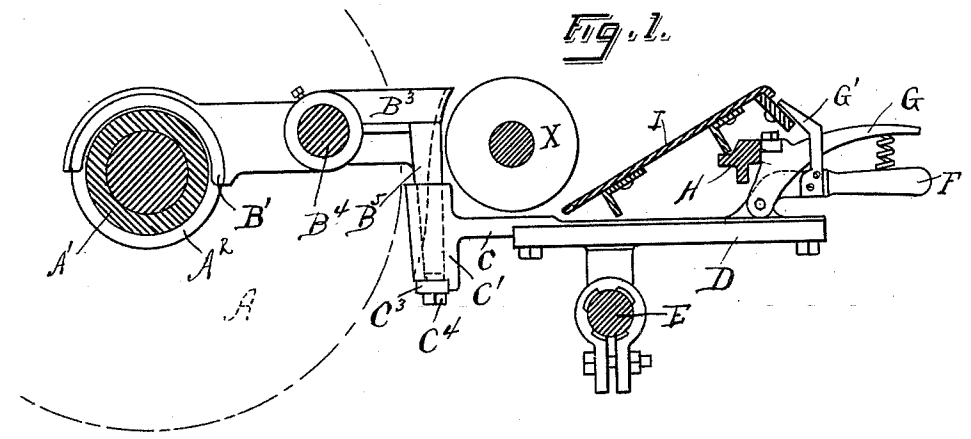
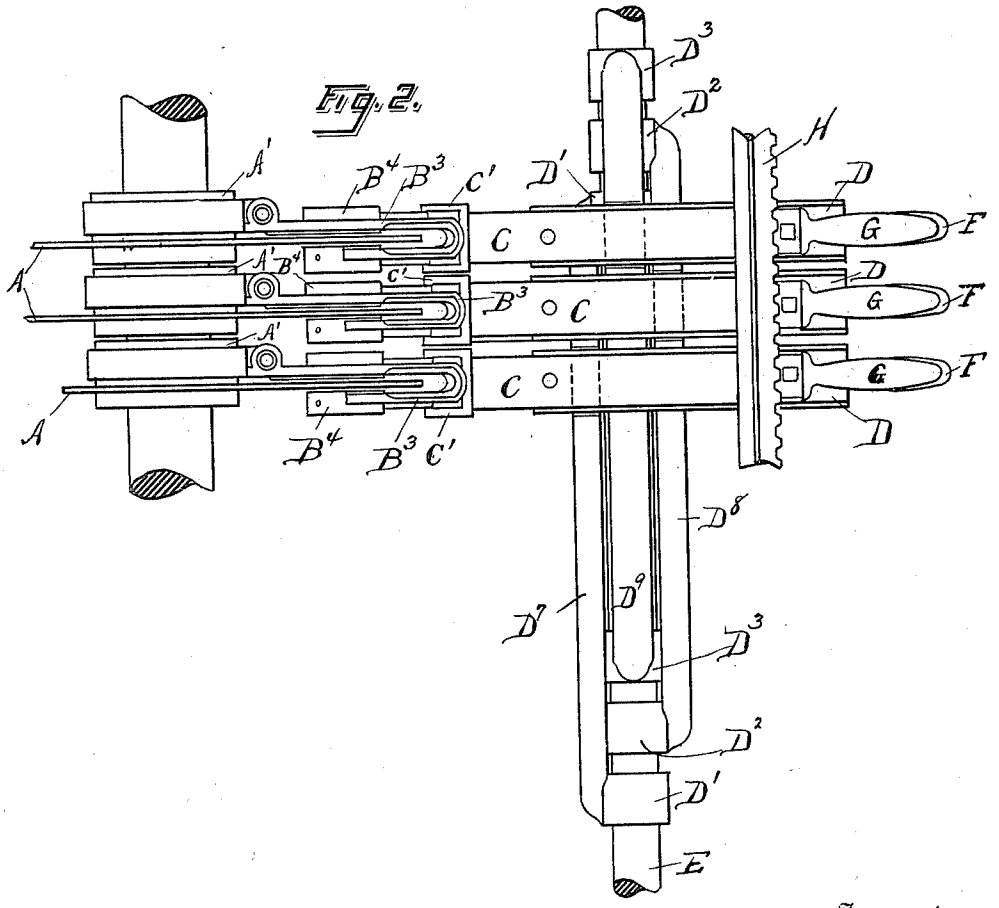


Fig. 2.



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(No Model.) 2 Sheets—Sheet 2

Fig. 3.

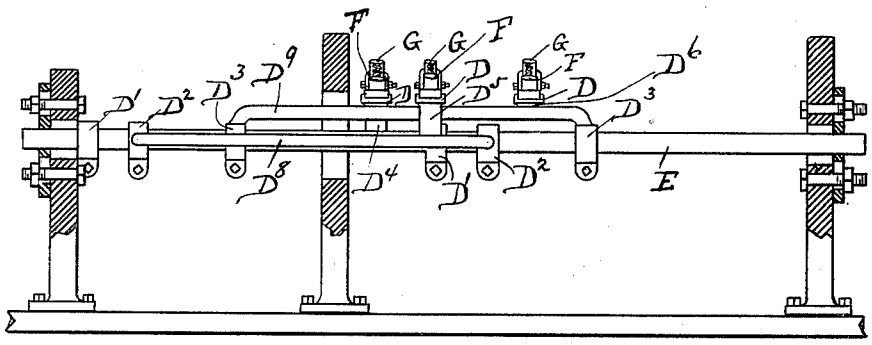


Fig. 4.

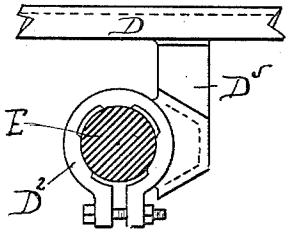


Fig. 5.

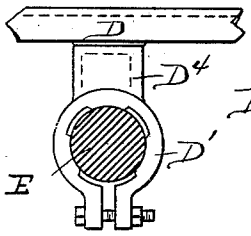
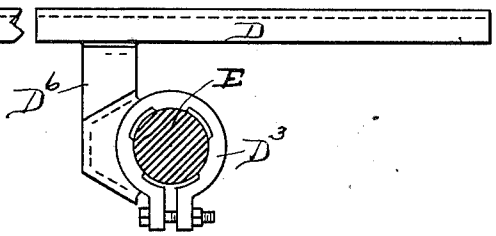


Fig. 6.



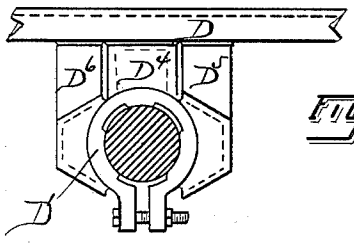


Fig. 7.

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UNITED STATES PATENT OFFICE.

STEPHEN B. KENFIELD, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR OF ONE-HALF TO JOHN D. EBY, OF OAKLAND, CALIFORNIA.

GANG-EDGER.

SPECIFICATION forming part of Letters Patent No. 626,431, dated June 6, 1899.

Application filed December 15, 1898. Serial No. 699,377. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN B. KENFIELD, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Gang-Edgers; and I do hereby declare the following to be a full, clear, and exact description of said invention, such as will enable others skilled in the art to which it most nearly appertains to make, use, and practice the same.

This invention relates to improvements in gang-edgers, and more particularly to shifters for rotary saws; and it consists in the novel construction and arrangement of the parts whereby two and more shifting devices may be mounted upon the one shaft or rod in such a manner as to permit lateral adjustment of each shifter independently of the other shifters mounted upon the same shaft or bearing, and, further, whereby the sets of shifters may be amplified by duplication and whereby the bearings of each of the shifters is rendered steady to prevent lateral movement or vibration.

In the drawings, Figure 1 is a side elevation of a shifter mounted upon a guide-rod and shown in section, the saw-collar of a saw, the guide-pin and feed-roll, and the index-bar in their position relative to the said shifter. In this view is shown in dotted lines the arrangement of a second guide-rod and the bearings and spreader-bars as they will be arranged upon the same should we desire to amplify the number of shifters. Fig. 2 is a plan view of the set of shifters, consisting of three, and showing the arrangement upon the guide-rod of their bearings together with the locking-bar, by means of which they are locked in position, and the saw which they affect. Fig. 3 is a detail view, in front elevation, showing the guide-rods, the shifters separated and adjusted upon the same, and the frame of the machine upon which the invention is mounted partly cut away in section to show the manner of mounting the guide-rod. Figs. 4, 5, and 6 are detail views, in side elevation, showing in section the guide-rod for one set of three shifters and the bed-plates of each of the shifters, together with a bearing and spreader-bar. Fig. 7 is a detail view showing the arrangement of the spreader-bars and bearings for a set of three shifters mounted upon one guide-rod.

To facilitate the description with reference to the drawings, we will let the letter A designate the saws.

The letter A′ designates the saw-collar, having a groove A^2. Into this groove is inserted the flange B′ of the shifter-guide.

As shown in the drawings, the shifter-guide used in this invention is provided with a widened top or extension that overlies the groove A^2 for the purpose of shielding the same from dust. The shifter-guide is joined to the yoke B^3, which carries the guide pins or bosses B^4. The yoke and its attachments are mounted in a perpendicular socket C′, formed on the end of the plate C of each of the shifters. This socket is provided to receive tapered side bearings B^5 of the yoke B^3. At the bottom of the socket is provided a washer C^3 for a headed bolt C^4. The bolt C^4 is suitably threaded to enter a threaded perforation in the bottom of the extension of the yoke, as shown in Fig. 1 of the drawings. The yoke is cut away on its forward face to provide a throat passage-way for the dust from the saw, as shown in dotted lines, Fig. 1.

The bed-plates D are each provided with downward extensions, which are integrally formed with or rigidly attached to one of the spreader-bars extending between the spread bearings of the shifter.

To readily distinguish in the drawings the parts that belong to the several shifters, we will designate each pair of bearings as D′, D^2, and D^3 and the downward extension from the plates D as D^4, D^5, and D^6, respectively. The two bearings constituting the pairs are equally separated in each shifter or each shifting device by means of spreader-bars D^7, D^8, and D^9.

The separation or spread of the bearing of each shifting device may be to any extent desired, it being, however, necessary that the spread of each should be sufficient to give it room to spread its required distance before the inner bearing of each comes in contact with the bearing of another shifting device mounted upon the spreader-rod.

Each of the extensions D^4, D^5, and D^6 is

mounted upon the spreader-bars as near the one end of the same as is practicable, so that in their nested positions the bed-plates D lie close together near the one end of their respective pairs of bearings, while the bearings at the other end of the spreader-bar are in their respective positions next to each other, but removed from the bed-plates the full extension of the spreader-bars, as shown in Fig. 2.

The guide-rod E, upon which the bearings are usually mounted between the sides of the gang-edger, but in the present invention the one side of the gang-edger, is provided with an opening sufficiently large to permit the bearings and spreader-bar upon the end removed from the bed-plates D to pass through the side of the frame, while the mounting for the rod E is provided in its extended position, either by means of a bracketed bearing or a bearing in the journal-standard, with which these machines are usually provided, to receive the driving-pulleys to operate the saw-arbors. When mounted in this position, it is obvious that the outer bed-plates D may be shifted laterally to nearly the full extent of the width between the inner faces of its bearings. It is also obvious that after the first shifter has been so spread in either direction the others may be separated within the full limits, so that in a nest of three saws they may be spread outwardly from each other to the full limits of the frame of the machine by providing the necessary length in the spreader-bars.

Mounted upon the plates C are the shifting handles and latches F and G, respectively. The handles F are formed integrally with the plates C, which are secured to the bed-plates D by means of suitable fastenings. The latches G are provided in their forward ends with teeth which are adapted to strike in and engage the rack-bar H, which extends across the frame of the machine. When the latch is released, the teeth with which it is provided engage the teeth in the rack-bar and the shifters are locked in the set position.

Extending over the devices and under the feed-roll X, inclined upward and forward over the rack-bar H, is an apron or shelf I, stationarily mounted upon the frame of the machine. In its forward edge it is provided with an index or graduated scale, over which is moved the pointer G', extending up from the handle F, and by means of which the location of the saw is marked.

There is shown in the present drawings a neat and workmanlike construction for the mounting of three shifters upon one guide-rod. It is obvious that by a different construction more could be mounted upon the same rod by providing the necessary construction to obtain a clearance for the spreader-bars. It is preferred by me, however, for the purpose of strength to maintain the construction of the spreader-bars in practically the lines shown in the drawings, and when an amplification of the shifters is desired to add to them by mounting another set upon a second rod, as shown in the drawings at Fig. 1. It will be understood that this adding of different sets may be carried on to the full limit, as desired, for the number of saws employed in gang-edgers.

The bearings for the spreader-bars shown in the present drawings are illustrated as compressible collars. It will be understood that while I prefer this form, because of its ready and easy adjustment for taking up wear I am not confined to such a construction, any of the well-known forms of bearings being capable of serving the purpose without altering the spirit of this invention.

Having thus described this invention, I claim—

In a gang-edger, the combination with two or more suitable saw-shifting mechanisms; of a guide-rod extended across the frame of the machine; two or more spreader-rods having bearings at each end and in line to engage the said guide-rod and one bearing on each spreader-rod extending between the bearings of the other spreader-rod; and suitable connections between the said shifting mechanisms and spreader-rods, substantially as described.

In testimony whereof I have hereunto set my hand this 31st day of October, 1898.

STEPHEN B. KENFIELD.

Witnesses:

F. H. ELVIDGE,

E. F. MURDOCK.